



New Glarus Brewing Company

Green Tier Breweries

Annual Report 2016

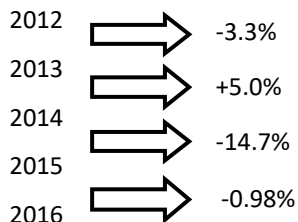
An Efficient Brewing Process — The New Glarus Brewing Company is located in New Glarus, WI. The Brewery was established in 1993 by Deb and Dan Carey. 110 + people are currently employed. The brewery's mission is to produce world-class, handcrafted beer. In 2016, the brewery sold 214,005 barrels of beer, up 10% over the previous year. New Glarus applied for the Green Tier program in 2012 and was accepted in August of 2013.

"To truly become number one, you must constantly strive to surpass yourself... not the competition." -Deb Carey

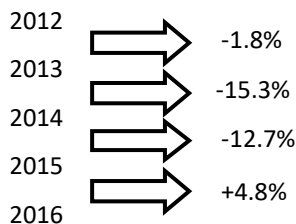
Sustainability affects every process and person in a brewery and community. Our brewery has embarked on a quest to reduce consumption through process improvements and system upgrades. The individuals involved are what make this standard equipment unique: Brewers challenge the process to utilize resources more effectively, Team Leaders dream up ways to reduce our use of resources, Programmers modify systems, Welders modify pipes and fittings, Lab Technicians evaluate cleaning programs, Gift Shop Staff communicate our story to visitors and Maintenance Technicians install equipment and support operations. Improving sustainability is a team effort.

Energy Consumption (per bbl of production)

Gas (Next target is a 1% reduction)



Electric (Next Target is a 1% reduction)





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An Efficient Brewing Process – continued

2016 Items in Review

- Water Savings on the Packaging Line
The Packaging Team has been able to reduce water consumption used for line lubrication and water rinsing of bottles.
- Warehouse-Vertical Dock Levelers
In 2016, NGB added more docks and warehouse space. NGB removed older style docks and added the vertical docks into the new addition. The vertical docks reduce air infiltration.
- Garbage Stream Analysis provided insight as to effectiveness of programs.
Recycling glass via the single stream method was most efficient and cost effective. The cost of segregated glass recycling was \$333 per week more than single stream. (+166%)
- A continued use of LED lighting in new construction. (Total Cost of Ownership)
Electrical Energy consumption is 40% less than conventional fixtures. We installed 38 fixtures in a 20,000 square foot warehouse addition. Occupancy sensors minimize “ON” time to only when people/forklifts are present, reducing consumption. The Expected Life of the LED fixture is almost 4-times longer than conventional bulbs; by not having fluorescent tubes or ballasts, we are able to reduce e-waste/recycling.
- NGB installed an aluminum can recycling baler to complement the installation of the Canned Beer Line.
The baler allows aluminum can waste from production to be crushed, handled easily, and recycled. NGB has increased aluminum recycling by about 130 lbs per month.
- Using Reverse Osmosis treatment for Boiler Feed Water did not fit our situation.
The system would not be utilized enough for a payback. The 90% return of steam condensate reduced the need for make up water and chemical additives.

2017 Goals

- Evaluate the effectiveness of High Speed Doors between “Cooler Storage” and “Ambient Areas”.
Observe humidity levels and temperatures on both sides of the door.
- Evaluate ways to reduce water consumption.
Reduce water use during centrifuge sanitation/operation by 1 hl per cycle of operation.
- Investigate the addition of a Desuperheater into our refrigeration system.
- Continue efforts to recycle materials.
Recycling dunnage pillows from inbound shipments.
Continue to have less than 13 yds. of operations garbage per week despite increasing growth.



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Sustainable Brewing Process – These are the actions you have or will take in your processes that drive you as close to truly sustainable as possible.

Water Target; Reduce water ratio to 3.5:1, ultimate goal is 2.5:1

What is your past, current and future BBL beer to BBL water?

| | | |
|--------|---|-------|
| • 2012 | → | -3.8% |
| • 2013 | → | -1.0% |
| • 2014 | → | -5.5% |
| • 2015 | → | -1.1% |
| • 2016 | → | |

What actions have you taken to get you to this point?

- CIP system 1 & 2 system upgrades, chemical & water recovery tanks.
- Brewhall Heat Recovery System reduced CIP's for a fouled kettle, decreasing water and chemical use.

What actions will you take to achieve your goals? (To reduce water use)

- We plan to continue evaluating cleaning programs to reduce cycles and volumes.

Reduce-Reuse-Recycle

Divert waste from landfill and recycle materials

- Less than 12 yards per week to landfill, which includes Hospitality & Brewery Production garbage.
- 2013—22.8 tons of paid for recyclables. NGB segregated cardboard and stretch film and sold them instead of paying to haul it away.
- 2014—45.25 tons of paid for recyclables. NGB started segregating some high use plastics and paper.
- 2015—65.1 tons of paid for recyclables.
- 2016—111.59 tons of paid for recyclables.
- Pallet recycle, reuse, and repair program is ongoing.



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Reduce-Reuse-Recycle-continued

What have you been doing to drive down the amount of waste from your processes?

- Scrap pallet re-use and recycle operations.
- Working with suppliers to improve product quality.
- Electronics recycling continues to improve.
- We have changed some ingredients from small bags to super sacks and some to bulk.

Sustaining Community

What have you done and are you planning to do to increase your interaction with the community and employees?

- Events sponsored in part by New Glarus Brewing. (See next page)

New Glarus Brewing Company has been a proud supporter of events in our village. The brewery is a major sponsor for Oktoberfest, the Beer, Bacon & Cheese/Polkafest event, and the annual Bike Rodeo for Kids. We are grateful to the village that we've called home for over 20 years and we donate money, beer and merchandise, as well as our time, to help support the village's many events and organizations.

- 110+ employees and growing.
- Use of local skilled labor in construction/maintenance of the brewery.
- Hospitality staff advocates "Local" businesses & information.
- The bottles that New Glarus Brewing fills are now manufactured in Burlington WI, by Ardagh Group.
- New Glarus Canned Beer contains packaging by Menasha Corporation from its Neenah, WI location, Cans are made by Ball Corporation in Fort Atkinson, WI, & the can filler is from KHS, a German company, whose American offices are located Waukesha, WI
- In total, \$8.5 Million of packaging materials are purchased annually from manufacturers in WI.

People Planet Profit

- We use local suppliers for raw materials.
- We currently have 327 suppliers in WI.
- We use Green Tier Company Suppliers; currently 6.
- Our suppliers use recycled contents; cullet glass 25-35%, paper related 34 %.



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**Your support of New Glarus Brewing Company
resulted in donations to the following friends**

Merry Christmas!



Greenhead FFA
Black Hawk FFA
Black Hawk High Prom
Brownstown Fire District
Big Brothers/Big Sisters Green County
Boys and Girls Club Dane County
Brookhead Post Prom
Brookhead FFA
Brookhead FFA Alumni
Gloria K. Scott 5K
Glo's Garden
Great Steps 4 NF
Green Haven
Good Fellas "Ride for UW Childrens Hospital"
Hollandale Fire Department
Hollandale Sportsman Club
Henry Vilas Zoo
Herd Festival
Juda School Hill Clim
Juda FFA Alumni
Juda Fore Fathers
Juda Post Prom
Juvenile Diabetes Walk to Cure
Journey Mental Health
JDRF Type 1 Diabetes
JDRF One Walk
Justice For A Cure
Keep Wisconsin Warm
Madison Khawis Foundation
Madison Public Library Foundation
March of Dimes
Milwaukee Public Television
MDA Tub Run
Monroe Justice for a Cure
Monroe Arts Center
Monroe Blues Hockey
Monroe Balloon and Blues Festival
Monroe Clinic Hospice
Monroe Clinic Hospice Best Bash
Monroe Clinic Volunteers
Monroe Fire Department
Monroe High School
Monroe Green Haven
Monroe Parks & Recreation
Monroe Red Cross
Monroe Red Run 2016
Monroe Relay For Life
Monroe Shriners
Monroe Youth Hockey
Monticello Foundation Golf Outing
New Glarus School Wyeusling Park
New Glarus Police Department
New Glarus Small World Childrens
New Glarus Special Olympics
New Glarus Swiss Church Golf
New Glarus Swiss Historical Village
New Glarus Sports Boosters
New Glarus Teachers Golf Outing
New Glarus Winter Fest
New Glarus Yodel Club
Neumunstermatsch Midwest
Old World Wisconsin
Parkinson's Disease
Project Home

Parishville Partridge
Potter Lanes/Second Harvest Post Club
Hondas McQuinn House
REAP Food Group
Rhumba 4 Rainbow Benefit
Ride to the Barns
Salvation Army Red Kettle
St. Jude
St. Victor's Fundraiser
Second Harvest Food Drive
Sugar River Swim Team
SWCAP Gala Fundraiser
Save a Life Golf Scramble for Suicide
SCAND Auxiliary Social Committee
Take Steps for Crohn's & Colitis
Tall Pine Conservancy
Tyler Pierce Memorial Suicide Fundraiser
Yellowstone Lake Police Riding Derby
USA Men's State Hockey Team
UW Dairy Dash Fundraiser
WBCA State Boys Basketball All-State
Breast Cancer for Women Golf Outing
Camp Gray
Carbone Cancer Center Boers and Bras
Carbone Cancer Center
Chicago Fire Department (Betty)
Dane County Sheriff's Benefit
Dane County Safe Ride
Dane County Domestic Abuse Intervention Services
Dodge County Safe Ride
Dodge County Humane Society
Dream Court Program
Ducks Unlimited
Eagle Pass for Parkinson's Disease
Epilepsy Foundation Heart of Wisconsin
Farmfest for Life
Feed My People Food Bank
FLOOD Golf Outing
Green County Breakfast on the Farm
Green County Food Pantry
Green County Family Promise
Green County 4-H
Green County EMS
Green County Ag Chest
Green County Alliance on Mental Illness
Green County Community
Green County Emergency Management
Green County Fair
Green County Family YMCA
YMCA New Glarus After School Swim Class
Green County Foster Care
Green County Habitat for Humanity
Green County Humane Society Pedal for Paws
Green County Human Services
Green County Literacy Council
Green County Sexual Assault Recovery Program
Green County State Fair Dairy
Green County Tourism
Green County Fall Nationals
Green County FAITH
Green County UW Alumni Foundation
Green County Veterans Memorial Park
Monticello Post Prom Party
Monticello Public Library

Monticello Community Club
Monticello Spring Fling
Monticello FFA
Monticello FFA Alumni
Monticello PTO
Monticello Homecoming
Monticello BuckyRat Scramble
Monticello Lions Club - Dan Karlen Memorial
Monticello Fire Department, Memory for TJ Ditch
Madison Children's Museum
Matt Grossen Memorial Golf Outing
Milwaukee Children's Hospital
Museum of Beer and Brewing
National Wild Turkey Federation
New Glarus PTO
New Glarus American Legion
New Glarus Bike Rodeo
New Glarus Car Show
New Glarus Chamber
New Glarus Community Foundation
New Glarus Community - Music Fest
New Glarus Depot Dash
New Glarus Area EMS Keeping the Pulse 5K
New Glarus Lions Club
New Glarus PTO
New Glarus FFA Alumni
New Glarus Fire Department
New Glarus Fire Department Golf Outing
New Glarus Gift of Community
New Glarus Girls Basketball
New Glarus School
New Glarus Kinder Choir
New Glarus Polka for the Swiss
New Glarus Public Library
New Glarus Oktoberfest
New Glarus Post Prom Party
New Glarus School Knight Pride
New Glarus School Caring for Kids
Wisconsin Paralyzed Veterans Benefit
Wisconsin Tavern League
Wisconsin Public Television
Wisconsin Wetlands Association
Wisconsin Restaurant Association
Wisconsin Veterans Museum
Wisconsin Cheesemakers Association
Wisconsin Large Animal Emergency
Women for Women Cancer
Worm Ride (Memorial Ride Elain Gasber)
Wyosena Fire Department
Wisconsin Women's Network
Wisconsin Vietnam Veterans Chapter III
Wisconsin Deer & Elk Farmers Association
Wisconsin Holselt Convention



New Glarus Brewing Co.

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We're looking forward to a great 2017!